



Cribari Memorial Bridge Project Advisory Committee (PAC) Meeting #2

CTDOT State Project # 158-214

September 26, 2018

CRIBARI MEMORIAL BRIDGE

Meeting Agenda



- Welcome & Introductions
- Ground Rules
- PAC “Roadmap” & Binder Contents
- Update
- Current Bridge Deficiencies/Existing Conditions
- PAC Workshop
 - Existing Conditions
 - No-Build Alternative
- Next PAC Meeting



Meetings will

- Start and end on time
- Focus on input from PAC members
- Showcase diverse perspectives



PAC members will

- Be courteous and respect all opinions
- Have one speaker at a time
- Provide honest input
- Respect recommendations discussed at previous meetings
- Review materials provided in advance

Purpose: Information Exchange

CRIBARI MEMORIAL BRIDGE

“Roadmap” & Binder Contents



- Binder used throughout the PAC process
 - PAC member contacts
 - Important data
 - Meeting summaries
 - Presentations
 - And more...
- Roadmap is touchstone
 - A map for us to follow in this PAC process!





What Is Our Purpose?

The purpose of the project is to address the structural and functional deficiencies of the existing William F. Cribari Memorial Bridge (Bridge No. 01349), which carries Route 136 over the Saugatuck River in the Town of Westport, to provide a structure that accommodates safe vehicular, bicycle, pedestrian, and marine travel, is resilient to the changing shoreline climate and environmental conditions and considers the historic character of the bridge.



Existing Conditions

CRIBARI MEMORIAL BRIDGE

Existing Conditions



| Code | Description | Common Actions |
|------|--|--|
| 9 | EXCELLENT CONDITION | Preservation/Cyclic Maintenance |
| 8 | VERY GOOD CONDITION—No problems noted. | |
| 7 | GOOD CONDITION—Some minor problems. | |
| 6 | SATISFACTORY CONDITION—Structural elements show some minor deterioration. | Preservation/Condition-Based Maintenance |
| 5 | FAIR CONDITION—All primary structural elements are sound but may have some minor section loss, cracking, spalling, or scour. | |
| 4 | POOR CONDITION—Advanced section loss, deterioration, spalling, or scour. | Rehabilitation or Replacement |
| 3 | SERIOUS CONDITION—Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present. | |
| 2 | CRITICAL CONDITION—Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present, or scour may have removed substructure support. Unless closely monitored, the bridge may have to be closed until corrective action is taken. | |
| 1 | IMMINENT FAILURE CONDITION—Major deterioration or section loss present in critical structural components, or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic, but corrective action may put it back in light service. | |
| 0 | FAILED CONDITION—Out of service. Bridge is beyond corrective action. | |

Bridge Condition: Lowest rating of the Bridge Deck, Superstructure, or Substructure.

- Lowest @ 7 or Greater
 - Good
- 5 or 6
 - Fair
- Lowest @ 4 or Less
 - Poor

National Bridge Inventory

CRIBARI MEMORIAL BRIDGE

Existing Conditions



Structural Condition Rating

Deck: 5 (Fair)

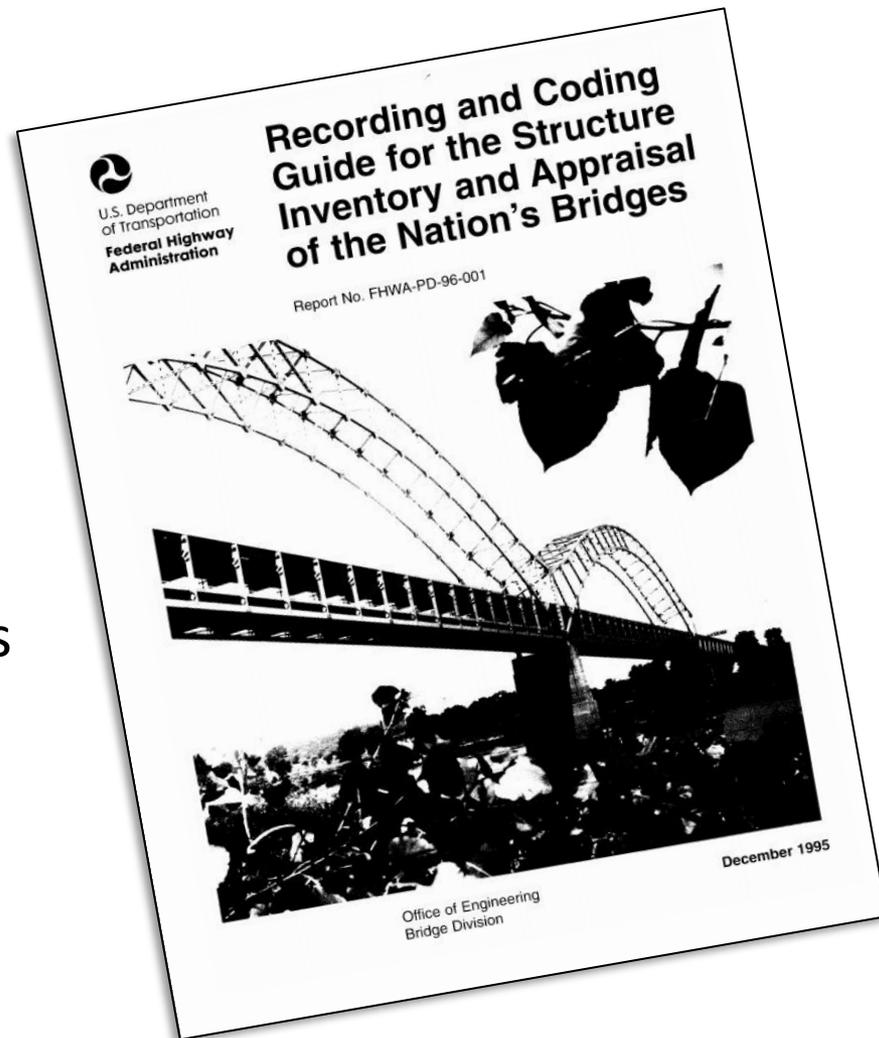
Superstructure: 5 (Fair)

Truss: 2 (Critical)

Substructure: 4 (Poor)

Pier 2 cross bracing: 2 (Critical)

By Coding guidelines, the Bridge is
“Structurally Deficient”

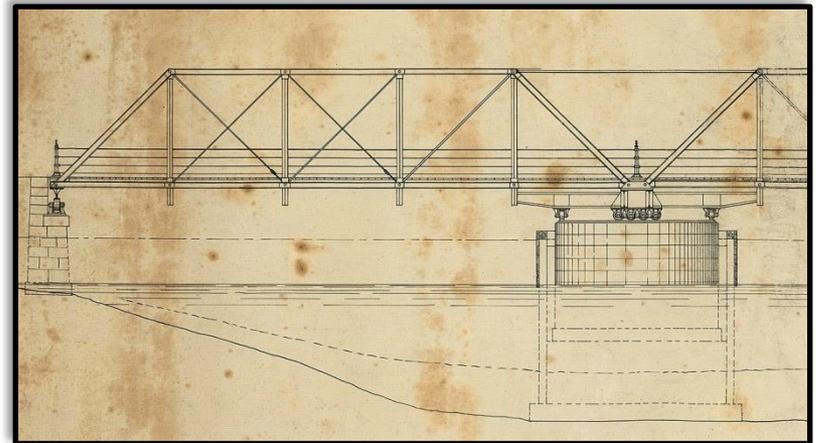


CRIBARI MEMORIAL BRIDGE

Existing Conditions

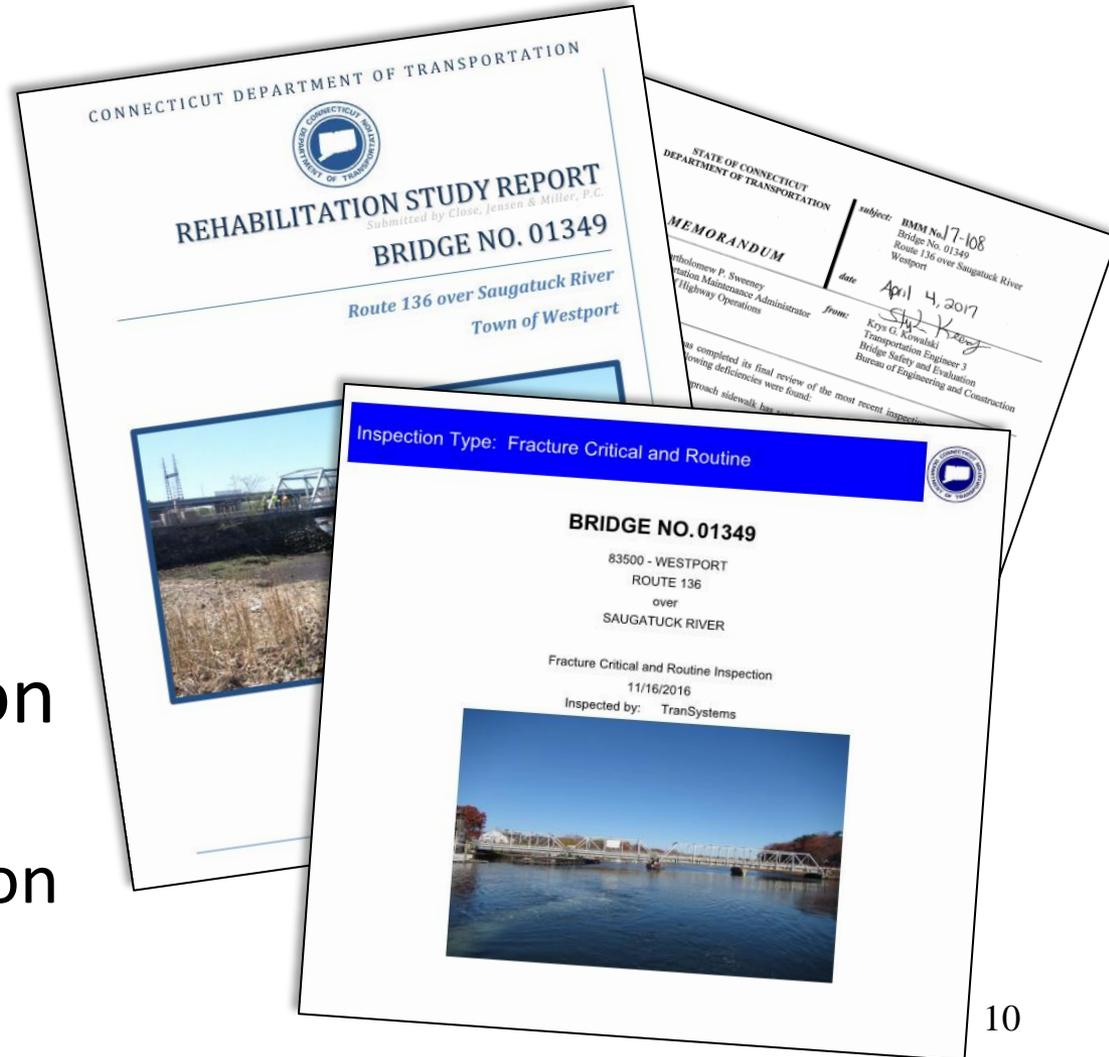


- **Structurally Deficient:** Any bridge which has the Deck, Superstructure, Substructure in Poor or worse condition [4 or less].
- **Functionally Obsolete:** Formerly a term used by FHWA to rate the geometry of the bridge.
 - Roadway layout
 - Adequacy to carry traffic
 - How many vehicles



THE KEY CONCERNS

1. Truss Condition & Stability
2. Pier Condition
3. Geometry
 - Safety
 - Truss Damage
4. Base Flood Elevation
 - Operating System
 - Roadway Inundation

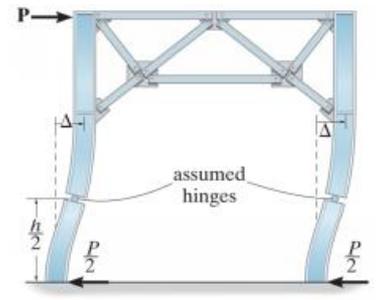
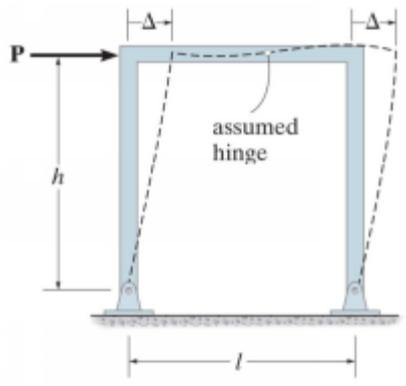
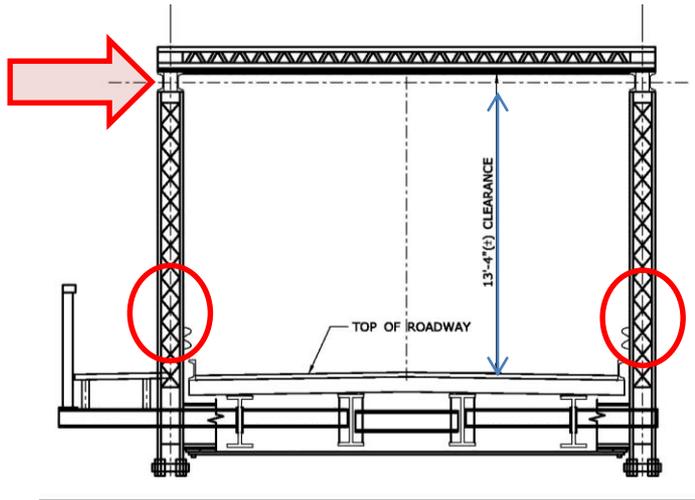


CRIBARI MEMORIAL BRIDGE

Existing Conditions



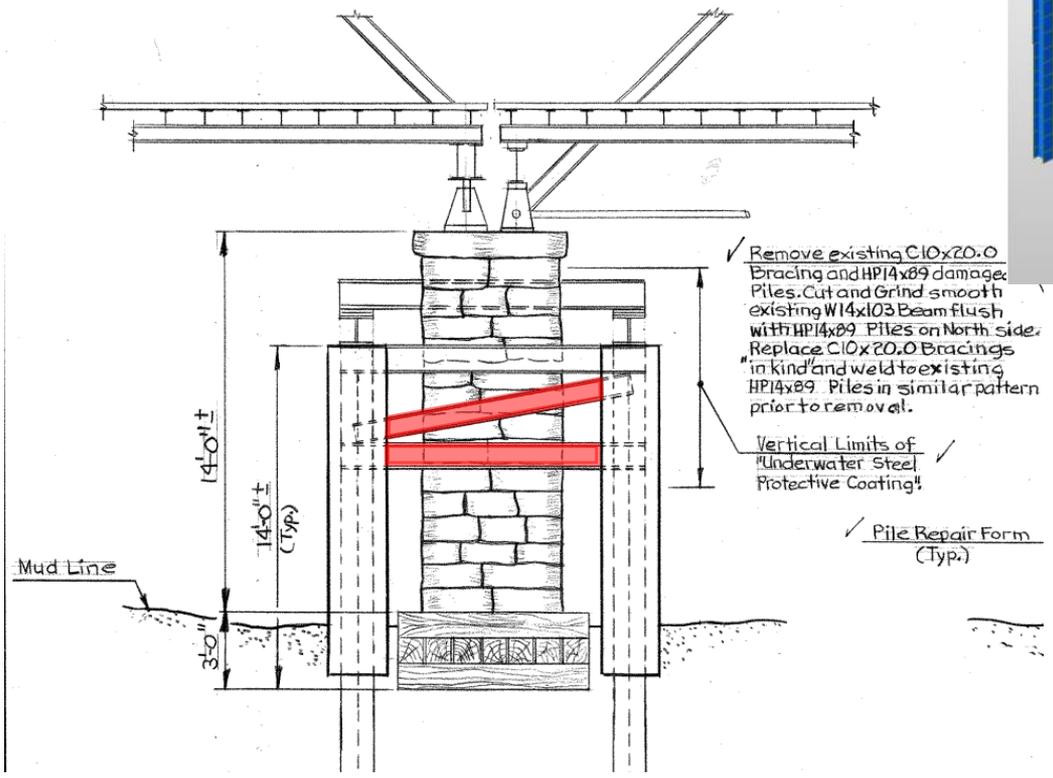
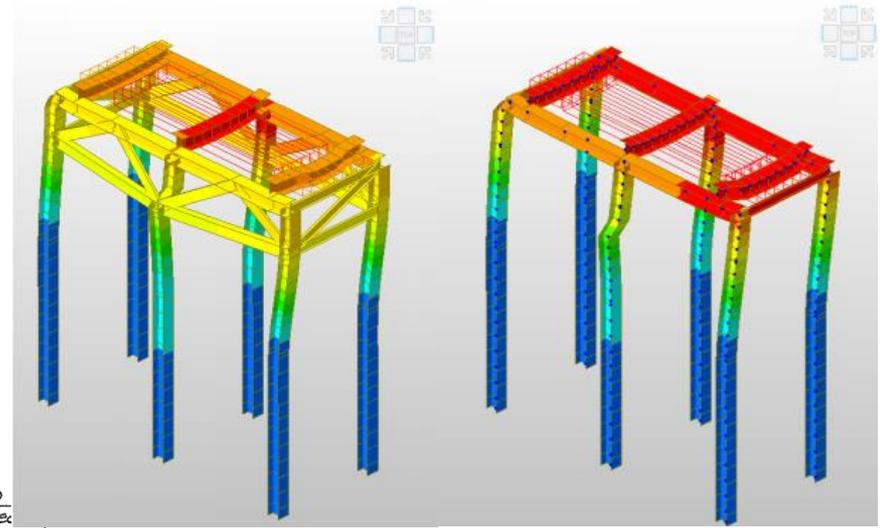
TRUSS & FRAME STABILITY



PIER CONDITION

Substructure Modifications

- Current Condition
- Load Posting



CRIBARI MEMORIAL BRIDGE

Existing Conditions



PIER & ABUTMENT CONDITION



East Abutment



West Abutment



Pivot Pier

CRIBARI MEMORIAL BRIDGE

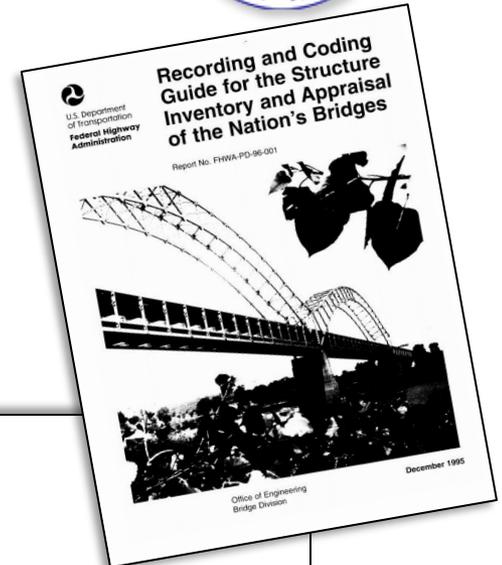
Existing Conditions



DECK GEOMETRY

Roadway Width: 19'-6"

- Coding Guideline Tables: Deck geometry rated 2
- Design Speed: 20 mph
- Avg. Daily Traffic (2015): 13,200 vehicles



| <u>Code</u> | <u>Description</u> |
|-------------|---|
| N | Not applicable |
| 9 | Superior to present desirable criteria |
| 8 | Equal to present desirable criteria |
| 7 | Better than present minimum criteria |
| 6 | Equal to present minimum criteria |
| 5 | Somewhat better than minimum adequacy to tolerate being left in place as is |
| 4 | Meets minimum tolerable limits to be left in place as is |
| 3 | Basically intolerable requiring high priority of corrective action |
| 2 | Basically intolerable requiring high priority of replacement |
| 1 | This value of rating code not used |
| 0 | Bridge closed |

Source: National Bridge Inventory
Recording and Coding Guide

CRIBARI MEMORIAL BRIDGE

Existing Conditions



BRIDGE GEOMETRY



CRIBARI MEMORIAL BRIDGE

Existing Conditions



BRIDGE GEOMETRY

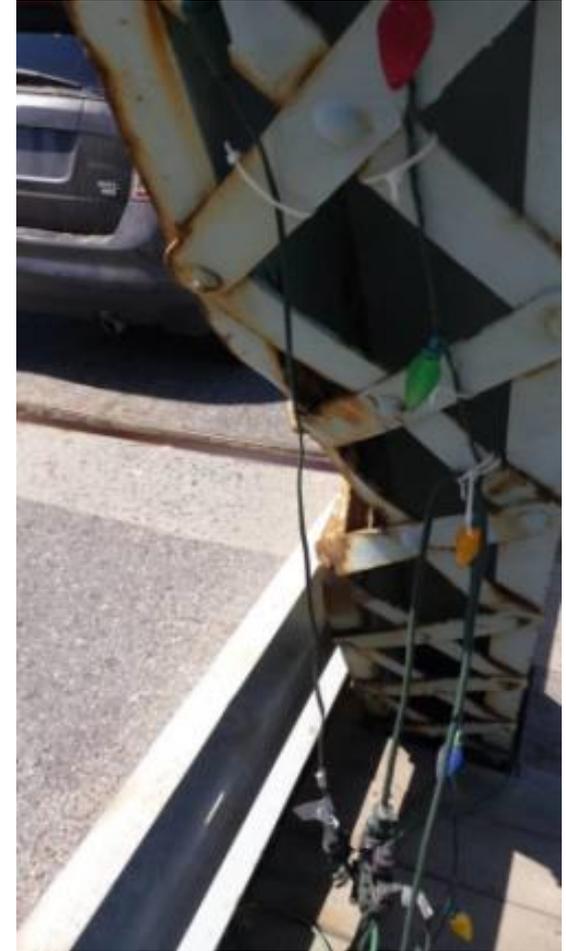


CRIBARI MEMORIAL BRIDGE

Existing Conditions



TRUSS VEHICULAR IMPACT DAMAGE

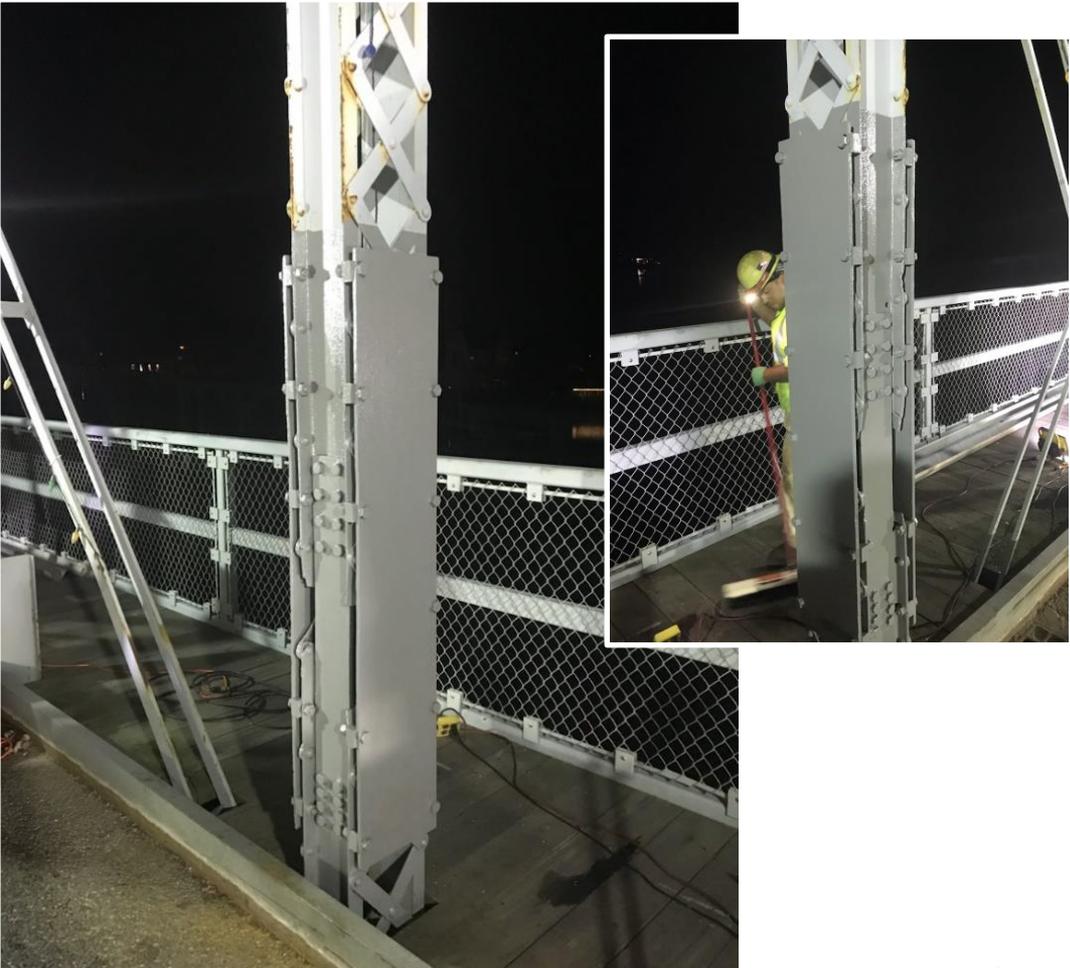
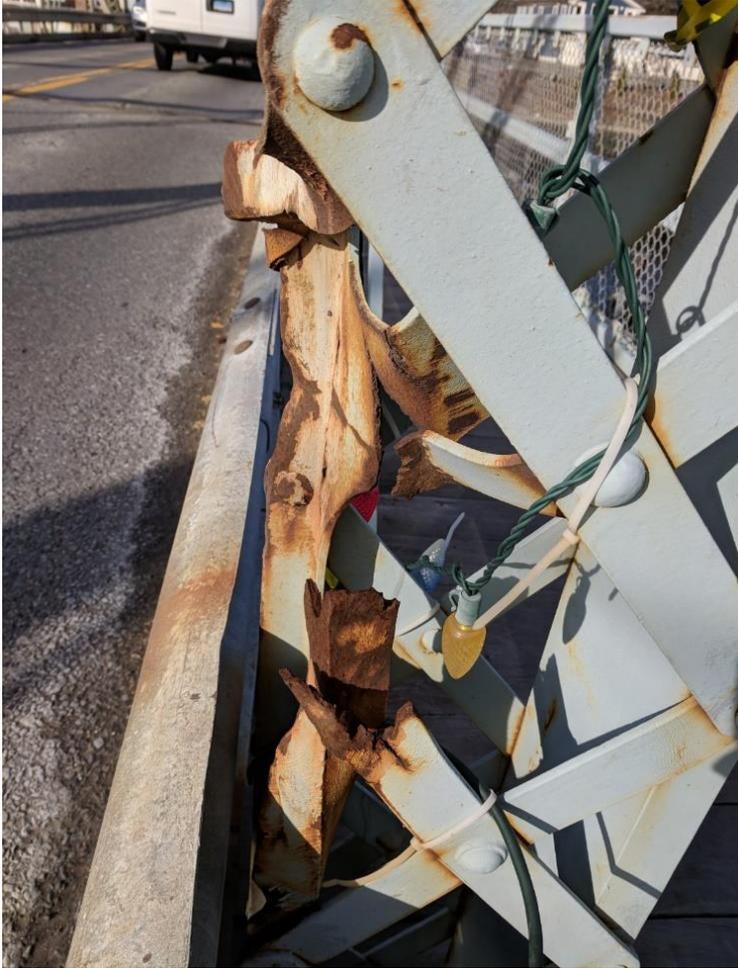


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Existing Conditions

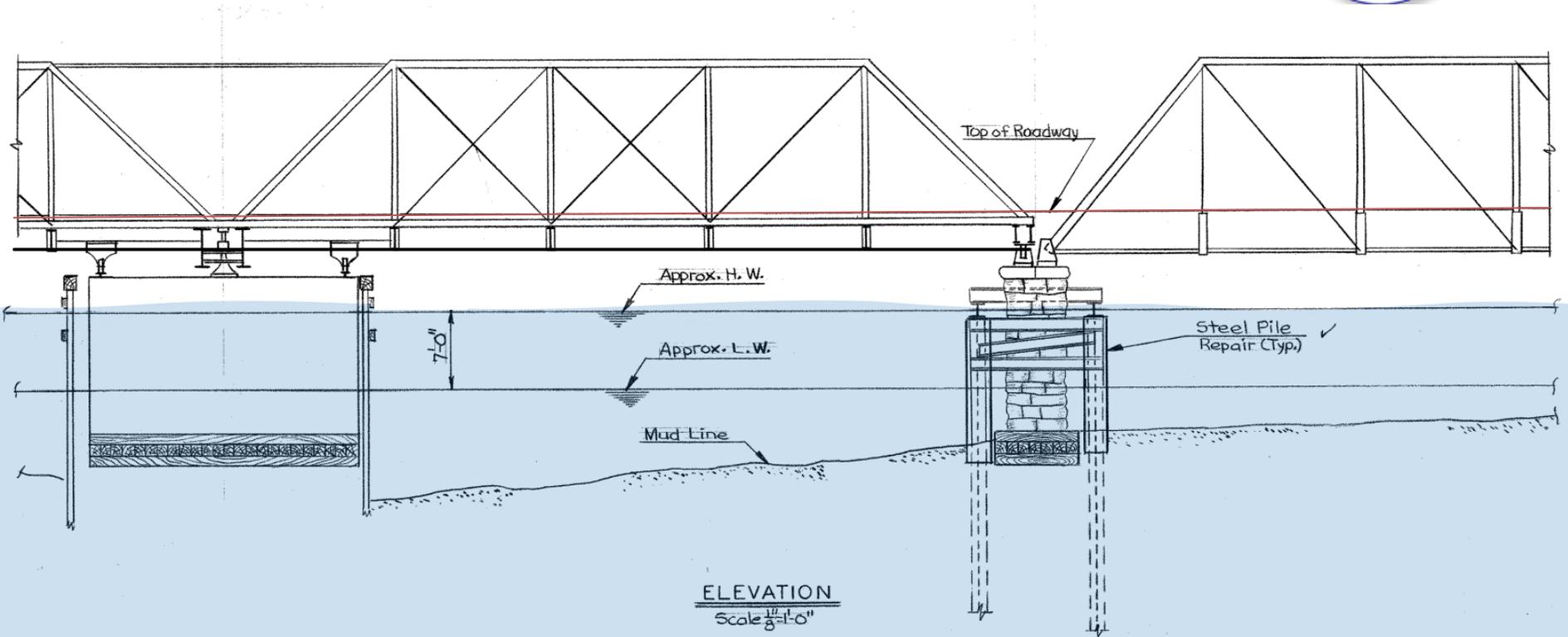


CURRENT REPAIR CONTRACT



CRIBARI MEMORIAL BRIDGE

Base Flood Elevation



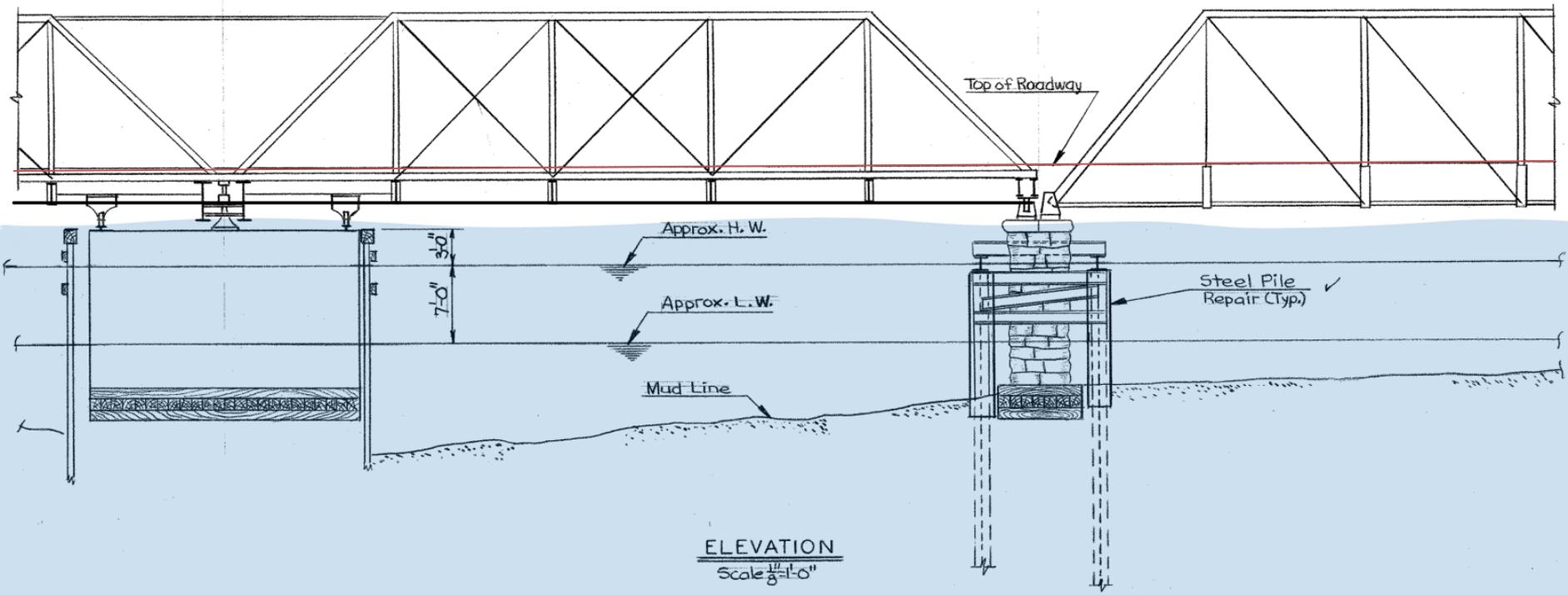
Mean High Water (MHW): + 3.1 ft

Underside of Structure: +10.2 ft

Top of Pier 1 Elevation: +7.9 ft

CRIBARI MEMORIAL BRIDGE

Base Flood Elevation



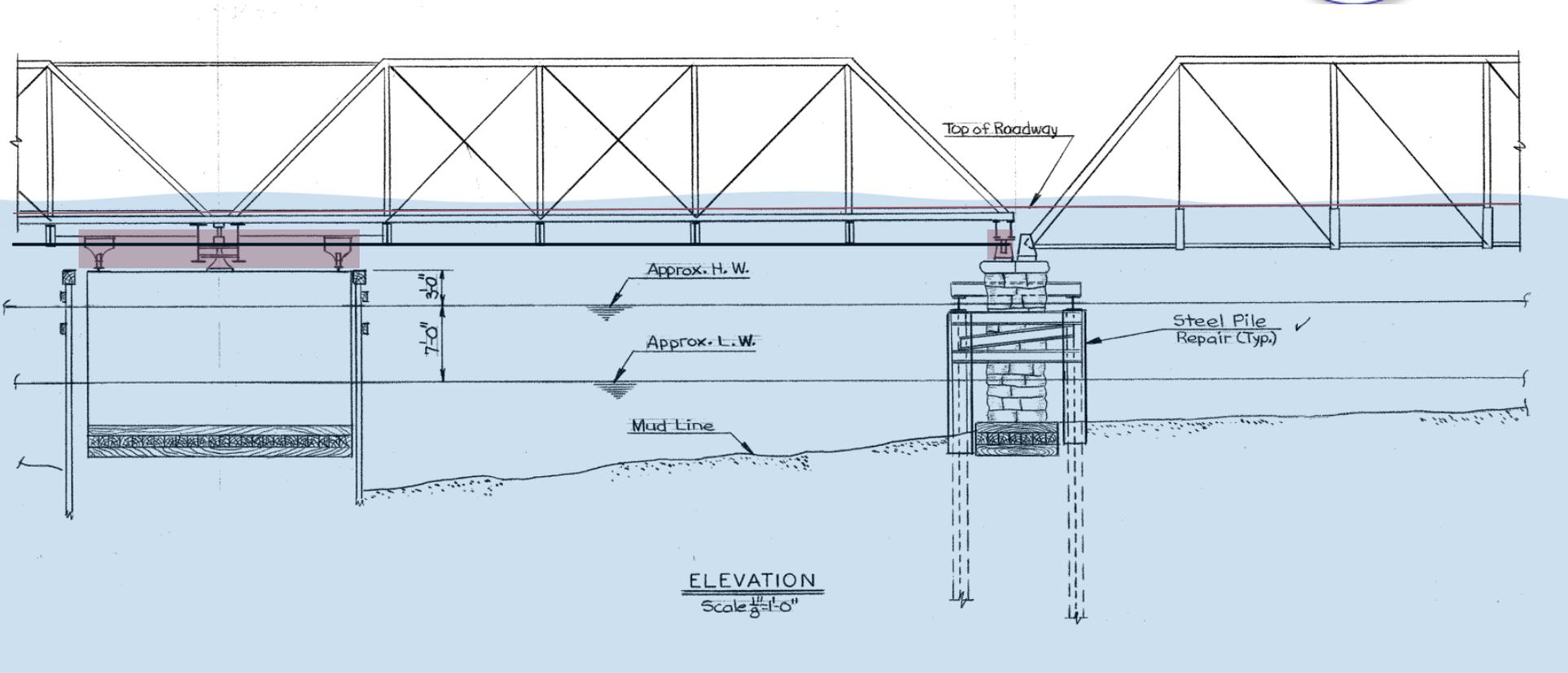
10-Year Storm: +8.1 ft

Underside of Structure: +10.2 ft

Top of Pier 1 Elevation: +7.9 ft

CRIBARI MEMORIAL BRIDGE

Base Flood Elevation



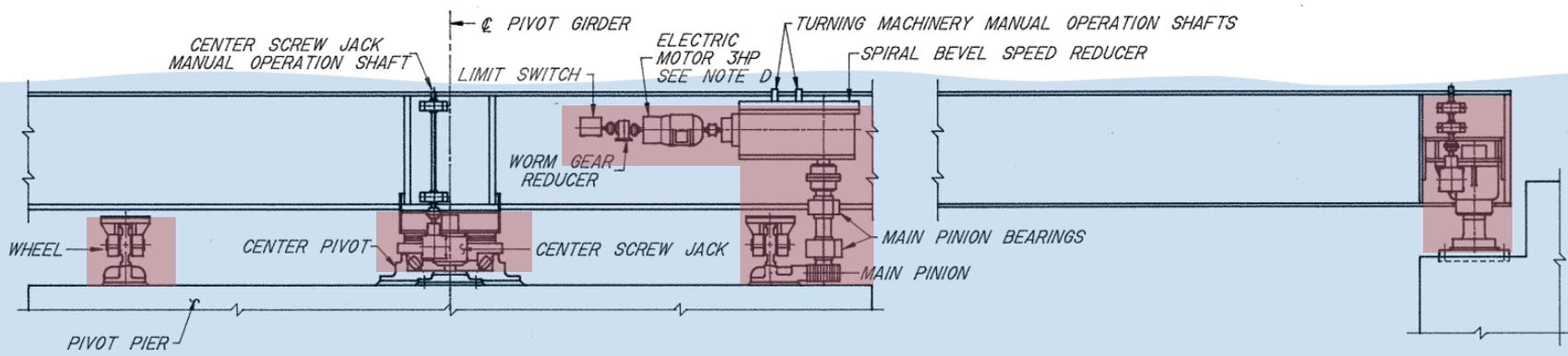
100-Year Storm: +13.0 ft (FEMA)

Top of Roadway: +13.8 ft

Sea Level Rise (SLR) Guidance (CIRCA Mid-Century)

CRIBARI MEMORIAL BRIDGE

Base Flood Elevation



100-Year Storm: +13.0 ft (FEMA)
Critical Operating System Components
Sea Level Rise (SLR) Guidance (CIRCA Mid-Century)

CRIBARI MEMORIAL BRIDGE

Existing Conditions



ADJACENT PROPERTIES



| No | Owner |
|----|----------------------|
| 1 | State of Connecticut |
| 2 | Private Owner |
| 3 | Private Owner |
| 4 | State of Connecticut |
| 5 | 535 Riverside LLC |
| 6 | Mill Pond Farm |
| 7 | Private Owner |



Workshop 1

CRIBARI MEMORIAL BRIDGE

Workshop – Existing Conditions



Given the information you have about the existing conditions of the bridge, what is your greatest concern about the bridge *as it exists now*?

| PAC Representative | Impact/Comment |
|--|----------------|
| CTDOT | |
| Bike Walk CT | |
| CT DEEP | |
| Commuter Rail Council | |
| CT Trust for Historic Preservation | |
| FHWA | |
| Sound Cyclists Club | |
| SHPO | |
| Town of Westport | |
| Westport P&Z | |
| Westport Chamber of Commerce | |
| Westport Preservation Alliance* | |
| Bridgeport Marina | |
| All Seasons Marine Works | |
| Westport Flood & Erosion Control Board | |

| PAC Representative | Impact/Comment |
|--|----------------|
| Boating Advisory Committee | |
| Conservation Dep't | |
| Shellfish Commission | |
| DeStefano & Chamberlain, Inc. (Resident) | |
| Westport Fire Dep't | |
| Westport Police | |
| Downtown Plan Implementation Committee | |
| Greens Farms Assoc.* | |
| Historic Bridge Foundation* | |
| Historic Bridges.org* | |
| Residents of Bridge Street (org) * | |
| Save Westport Now* | |
| Westport HDC* | |
| The Coalition* | |
| West COG | |

*Section 106 Consulting Party



“No Build” Alternative



“The ‘no action’ alternative looks at effects of not approving the action under consideration.”

No Action/No Build Alternative

- No Action
- No Change from existing management practices or level of management intensity
- Consideration of the No-Build is required by the NEPA/CEPA process

What Does “No Action” look like?

- CTDOT is obligated to continue maintaining a safe and operable bridge at this location
- Maintenance will be increasingly significant and ongoing
- Increased bridge shutdown events



What To Expect

- Stabilization of northwest retaining wall
- Strengthening the piers
- Repairs to the trusses (as in July 2018) on a 5-year basis
- Bridge machinery maintenance
- Emergency repairs following storm actions (as seen in 2012) to re-occur every 10-15 years
- Repaving roadway every 15-20 years. Last repaving was in 1994.
- Continued temporary bridge closures



Looking to the Future – Beyond Maintenance

- Bridge loads may be further restricted
 - Heavy loads such as school busses and emergency vehicles might no longer be permitted on the bridge
- Additional bridge closures may be required
- Sooner or later we are back in this room





Workshop 2

CRIBARI MEMORIAL BRIDGE

Workshop – No Build Alternative



Given the information you have about the “no-build” alternative, what is your greatest concern? *How will this alternative affect the group you represent?*

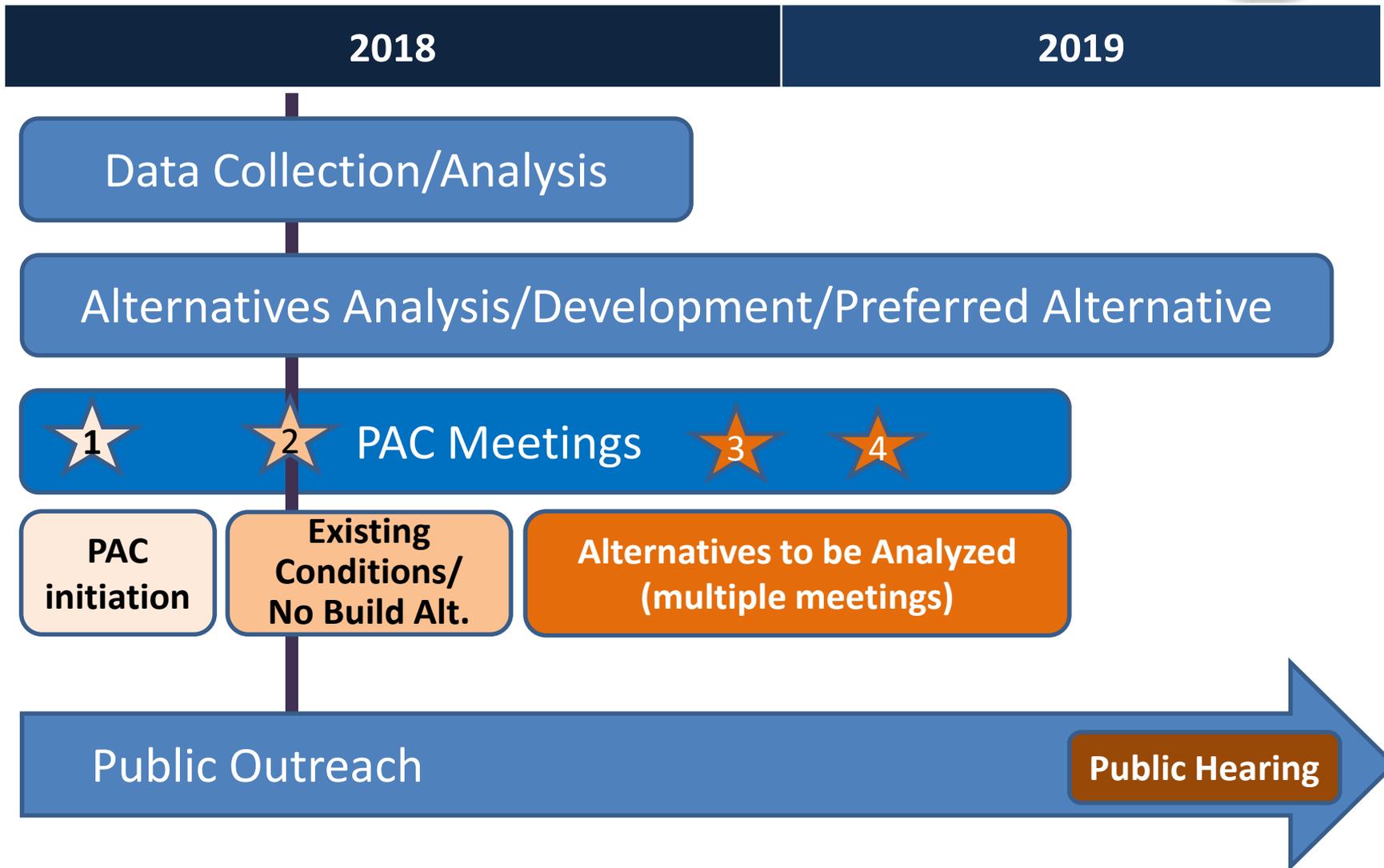
| PAC Representative | Impact/Comment |
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| CT DEEP | |
| Commuter Rail Council | |
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| FHWA | |
| Sound Cyclists Club | |
| SHPO | |
| Town of Westport | |
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| West COG | |

*Section 106 Consulting Party

CRIBARI MEMORIAL BRIDGE

Next PAC Meeting



2018

2019

Data Collection/Analysis

Alternatives Analysis/Development/Preferred Alternative

★ 1 ★ 2 PAC Meetings ★ 3 ★ 4

PAC initiation

Existing Conditions/No Build Alt.

Alternatives to be Analyzed (multiple meetings)

Public Outreach

Public Hearing



**Thank you for your
participation**

CRIBARI BRIDGE
RTE 136 OVER SAUGATUCK RIVER
WESTPORT

CRIBARI MEMORIAL BRIDGE

